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10/679,541	10/06/2003	Rick Chin	6175-059	3306

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Clifford Chance US LLP
200 Park Avenue
New York, NY 10166-0153

EXAMINER

WOODS, ERIC V

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,541

Applicant(s)

CHIN ET AL.

Examiner

Eric V Woods

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 and 29-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12 and 29-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Electronically Linking, Animating, and Folding Drawing Views.

2. The abstract of the disclosure is objected to because it does not adequately describe the invention as claimed. Several deficiencies are present, and they are, in no particular order: the drawings clearly illustrate that the software shows three-dimensional views, and this is not specified in the abstract (only two-dimensional); secondly, the term 'virtual' is redundant, since any actions performed on an electronic drawing would prima facie be virtual, since they would be carried out on or by a computer; finally, the program as claimed is intended to work with CAD / CAM programs such as those by SolidWorks™ (as cited by applicant), and the primary or intended use should be cited in this case (e.g. for CAD-type applications), as "electronic drawings" could also represent views from simulations, rendered graphics, et cetera.

Correction is required. See MPEP § 608.01(b).

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Response to Amendment

4. The amendment filed concurrently with the application has been entered, leaving claims 7-12 and 29-37 pending. It is noted that before such claims would be passed to issue, claims 36 and 37 would be renumbered, as they are dependent on claim 7 or claims that are dependent upon it.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, applicant does not specify what “the conventional drafting standard” is, and claims 36 and 37 are clearly evidence that applicant is aware of relevant standard(s) in the art, and thusly reciting bland language such as “the conventional drafting standard” makes it impossible for examiner to know what, specifically, applicant is referring to. One of ordinary skill in the art would not be able to determine from the claims and the specification the scope of this claim as set forth above.

In this specific instance, there is no language in the specification supporting a specific or generic class of standards as conventional, so applicant cannot claim that he is acting as his own lexicographer because there was no implicit or explicit disclaimer to that effect, and no explicit or implicit definitions provided to support that position.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7-9, 29, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanratty (US 5,990,897).

9. As to claims 7 and 29,

A computer-implemented method of arranging a plurality of views of a three-dimensional model, the method comprising: (Hanratty 1:10-35, 3:10-55)

-Displaying the plurality of views on a computer screen in an arrangement wherein the arrangement represents a computer-aided design drawing layout; (see Fig. 3; Fig. 1B, multiple 2D surface layouts, 1:10-35, particularly 3:10-55, specifically 3:30-43; 5:49-6:30)

-Selecting a first view from the plurality of views; (particularly 3:10-55, specifically 3:30-43; 5:49-6:30 – in 7:5-30, the drawings are processed and in 7:45-55 discusses finding or selecting the plan or main view of the drawings)(Fig. 3 clearly illustrates this, with the multiple two-dimensional views being shown on the screen simultaneously.)

-Selecting a second view from the plurality of views; and (clearly in 7:5-30 and 8:15-45, all the objects in all views are first correlated with each other, then the main or plan view is selected, with other view(s) then being selected, and the relationships between the components present in the second or subsequent view(s) to the position of said

components in the man or plan view being correlated as set forth above) (Fig. 3 clearly illustrates this, with the multiple two-dimensional views being shown on the screen simultaneously.)

-Automatically moving at least one of the first view and the second view to position the first view and the second view in closer proximity to one another thereby creating a new arrangement representing a new layout. (Clearly, as shown in Fig. 3, multiple two-dimensional views shown on the screen simultaneously via software are well known in the art. In 6:10-45, it is taught clearly that the user may organize the views in the view set manually, or the system can do it automatically. This clearly establishes that the user can configure the overall view set one-way or the other, and by moving views around.)

Reference Hanratty clearly teaches all of the limitations. Clearly, as set forth above, in Fig. 3 Hanratty teaches the display of a plurality of views of a drawing, and that the software will automatically select the plan view as the first view set forth above. Then the user can manually select other desired view(s) or have the software perform that tasking, as set forth above. Clearly, in Fig. 3 various views are shown arranged around the plan view, as the above-cited sections of Hanratty clearly suggest that they would be. Additionally, there is a 1:1 correspondence between Fig. 5 of applicant's drawings and Fig. 3 of Hanratty – same number of views presented, etc.). Obviously, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Hanratty to allow the user to move the multiple views of

the object in one window around, as Hanratty clearly establishes that the views can be presented in multiple windows (6:8-40) or in one window (Fig. 3).

10. As to claim 29,

The claim is substantially similar to claim 7, with the only differences as follows: claim 7 is drawn to arranging views, whereas claim 29 is drawing to rearranging views. Since the preamble only summarizes the claim limitations, it is not being given weight (A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).). Therefore, this distinction is meaningless.

The second difference is that claim 29 automatically creates a new drawing layout with the views in proximity to each other, with at least one in a new location on the computer screen. Firstly, claim 7 recites that one of the views is moved in closer proximity to the other. Obviously, the repositioned or moved view has been moved to a new location on the computer screen. Thusly, the only difference is that a new drawing layout is created. This is a trivially obvious variant, as displaying the results of a new drawing process in another window is well known in the art. Further, Hanratty clearly establishes that drawings can be in multiple windows (6:8-40) or in one window (Fig. 3), which means that in light of Fig. 3 and the fact that the views are independent of each other, putting the results in a new window would be obvious, particularly that Hanratty

teaches that during automated processing, if the system finds that a TCS does not exist for the section of the solid that it is operating on, the system creates new one (11:65-12:31). This clearly establishes that the software creates new data structures if one does not exist. As such, it would be trivially obvious to open a new window and display the newly repositioned multiple views as recited above, and *prima facie* such views would be in new screen locations as set forth above.

11. As to claims 8 and 34,

A method, according to claim 7, further comprising automatically aligning the first view and the second view in accordance with a conventional drafting standard by snapping at least one of the first view and the second view into a position as prescribed by the conventional drafting standard.

Hanratty clearly teaches the use of drafting standards in aligning views in 13:22-14:53, particularly emphasizing 13:35-45 where the positioning of views is said to be specified by the standard, and to be done automatically. This clearly proves that the views in Fig. 3 are automatically aligned and positioned as set forth above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify it such that any elements of the above mentioned claim that are not present would be, but Examiner believes that all elements as recited above are indeed met by Hanratty, as cited immediately above. Further, existing CAD standards, such as the ANSI ones cited by Hanratty, would clearly be viewed as conventional since they are in fact well established in the industry.

12. As to claim 34 specifically, the only difference is the use of the word 'conventional' as set forth in claim 8. This difference is trivial, and set forth above in the rejection to claim 8 under both art and under 35 U.S.C. 112, second paragraph, is meaningless in this context.

13. As to claim 9,
A method, according to claim 8, wherein aligning the first view and the second view utilizes at least one transformation matrix for at least one of the first view and the second view.

Reference Hanratty teaches the above limitations, and does explicitly teach a "transformation matrix". Specifically, Hanratty teaches that his invention takes two-dimensional views and creates a three-dimensional object from it (3:10-55), and that 'transforming' the three-dimensional objects by operations such as rotation (23:50-24:40) generates new views of such objects. In any case, the view clearly is referred to as having a matrix applied to it (23:63-24:16, specifically), where the view could obviously be the 'first' or 'second' view referred to in the claim.

14. As to claims 35 and 36, Hanratty specifically states (13:20-60, particularly lines 35-42) that positioning of views is specified by an implemented ANSI standard that Hanratty uses. Since only the primary reference is utilized, no separate motivation or combination is required and that from the rejection to the parent claim is herein incorporated by reference.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanratty as applied to claim 9 above, and further in view of Fortenbery et al (US 6,198,487 B1)('Fortenbery').

16. As to claim 10,

A method, according to claim 9, wherein the transformation matrix for one of the first view and the second view performs a mapping between relative coordinates and an absolute coordinate system.

Reference Hanratty teaches the limitations of this claim implicitly but not expressly, in that multiple two-dimensional views (see Fig. 3) exist, and are mapped to a three-dimensional larger object, as set forth in the rejections to the claims above. This establishes a mapping of coordinates systems, but the translation between relative and absolute coordinates is not explicit. Reference Fortenbery teaches a system for converting two-dimensional views of an object on a computer monitor in a first software application to three-dimensional absolute coordinates in a three-dimensional model, and then the transference of that model to the coordinate system of a second application, such that relative to absolute coordinate transforms occur (12:5-67 teaches that two-dimensional models are converted to "object container coordinates" that are then converted to "a server world coordinate" system)(Fortenbery 10:36-67 clearly illustrates relative and absolute coordinate sets also as set forth above). Clearly, Fortenbery deals with two-dimensional views of three-dimensional objects, so it is analogous art and is directed to the same problem solving area as the Hanratty reference. Furthermore, as cited above, Hanratty teaches the mapping of two-dimensional coordinates to a three-

dimensional object, so it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the CAD and view manipulations of Hanratty with the coordinate conversion system of Fortenbery to allow the CAD system to take in objects from other programs and model them, as well as more efficiently process its own views during the view conversion process.

17. Claims 11-12 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanratty as applied to claim 7 above, and further in view of Fortenbery et al (US 6,198,487 B1)('Fortenbery').

18. As to claim 11,

A method, according to claim 7, wherein selecting one of the first view and the second view comprises positioning a cursor on the one of the views being selected and clicking a mouse button.

Reference Hanratty does not explicitly teach this limitation. Reference Fortenbery clearly teaches a computer system with a mouse (element 64 in Fig. 7), and that the system recognizes mouse clicks and selects an active view (20:18-64). Further, the use of a mouse click to select an object is well known in the art and is a fundamental of graphical user interface operating systems, such as that of the Microsoft® Windows™, where said OS is the platform on which the program of Fortenbery runs (3:5-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Hanratty and combine the CAD and view manipulations of Hanratty with the coordinate conversion system of Fortenbery to allow the CAD system to allow the user to have standard

functionality found in a GUI OS environment, and further to allow the user to more efficiently manipulate two- and three-dimensional objects and views as set forth in Fortenbery generally.

19. As to claims 12 and 32-33,

A method, according to claim 7, wherein selecting the first view comprises dragging the first view to a new location and dropping the first view at the new location.

As set forth in the above rejection to claim 11, reference Hanratty does not expressly teach this limitation. Reference Fortenbery teaches this limitation as an obvious modification; the rejection to claim 11 is herein expressly incorporated by reference. Microsoft® Windows™ operating system, as specified above, has certain well-known and inherent functions.

One of these is so-called 'drag-and-drop' capabilities, where a user can, for example, click on an icon or object in a window (or the desktop) and drag it to another window or location, and after releasing the mouse button, the object will be moved to the new location. Further, reference Hanratty specifies that the views can be presented in multiple windows (6:8-40) or in one window (Fig. 3), which means that in light of Fig. 3 and the fact that the views are independent of each other, while they can be automatically positioned in the main window (see rejection to claim 8). ** Examiner is taking Official Notice on the 'drag-and-drop' functionality of Microsoft® Windows™ as specified above. ** In light of the above facts, therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Hanratty and combine the CAD and view manipulations of Hanratty with the

coordinate conversion system of Fortenbery to allow the CAD system to allow the user to have standard functionality found in a GUI OS environment, and further to allow the user to more efficiently manipulate two- and three-dimensional objects and views as set forth in Fortenbery generally.

20. As to claims 32 and 33, the only difference in the claim language is whether the first or second view is dragged and dropped to a new location. That variation is a trivially obvious modification, as it would be obvious to allow the user to choose which window or view was being dragged and dropped.

21. Claims 37 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanratty as applied to claims 7 and 29 above, and further in view of Berkwald et al (US 6,356,285 B1)('Berkwald').

22. As to claims 30 and 37,

A method, according to claim 29, further comprising hiding unselected views.

Reference Hanratty does not explicitly teach this claim. Reference Berkwald teaches this claim, specifically wherein Berkwald teaches the use of a 'VIEW' menu with various options for hiding files (19:35-60), while it specifically teaches that the user can choose to hide selected or unselected files (19:60-20:6), e.g. the user can select two files or views, and then have the others be hidden. This technique clearly is applicable to situations where software is showing multiple views, particularly if, as set forth in the rejections to claims 7 and 29, they are in multiple windows. The references are directed to the same problem solving area, as Berkwald *inter alia* specifies that the invention is specifically directing to a system for analyzing and displaying information about

characteristic-dependent portions of an information processing system (1:6-15). As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the multiple views and windows of Hanratty with the window-hiding capabilities of Berkwald as set forth above, and because such window-hiding techniques are well-known in the art.

Conclusion

23/ The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Herken et al (US 6,724,383 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V Woods whose telephone number is 703-305-0263. The examiner can normally be reached on M-F 7:30-5:00 alternate Fridays off.

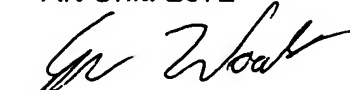
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

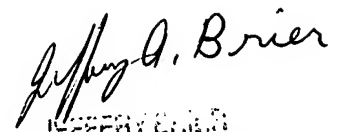
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Eric Woods

February 12, 2005


JEFFERY A. BRIER
PRIMARY EXAMINER